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■

MARINE SANITATION DEVICES

Advance Notice of Proposed Rulemaking

DEPARTMENT OF TRANSPORTATION

Coast Guard

[33 CFR, Part 161]

[CGD 73-83P]

MARINE SANITATION DEVICES

Advance Notice of Proposed Rulemaking

The Coast Guard is issuing this advance notice of proposed rulemaking for the purpose of obtaining data, views, and comments that may assist the Coast Guard in drafting proposed rules governing the design, construction, installation, and operation of marine sanitation devices.

This advance notice is being issued because early public participation will be helpful in the identification and selection of alternate courses of action.

Interested persons are requested to assist the Coast Guard by submitting written data, views, or arguments to the Executive Secretary, Marine Safety Council (GCMC/82), room 8234, 400 Seventh Street SW., Washington, D.C. 20590. Arrangements for individuals and groups to discuss the subject of this advance notice with representatives of the Coast Guard may be made with the Executive Secretary at 202-426-1477.

Therefore, comments on this advance notice should be furnished to the Coast Guard as soon as possible and no later than August 15, 1973. Copies of comments received will be available for examination in room 8234.

Under section 312 of the Federal Water Pollution Control Act (FWPCA), the Environmental Protection Agency (EPA) has promulgated Federal standards of performance for marine sanitation devices, which are required by the act to be designed to prevent the discharge of untreated or inadequately treated sewage into or upon the navigable waters from new vessels and existing vessels, except vessels not equipped with installed toilet facilities.

On May 12, 1971, the Environmental Protection Agency proposed standards (36 FR 8739) that would have required a high level of sewage treatment, approximately the equivalent of the secondary treatment standards for municipal waste facilities. In light of the comments received in response to its proposed standards, EPA found that flow-through devices to meet the proposed treatment standards are presently not available for smaller vessels, and are not expected to be available in time for installation by the effective date of the marine sanitation device regulations. For the reasons discussed in the preamble to its standards (37 FR 12391; June 23, 1972) the Environmental Protection Agency promulgated a standard requiring no discharge and added a provision to the effect that boat owners who install a device on existing vessels providing primary treatment and disinfection prior to the effective date of the standards will be considered to be in compliance with the standards for a period of time after the effective date.

With respect to regulation by States or political subdivisions before and after the effective date of the standards and regulations, section 312(f) of the act provides:

(f) (1) After the effective date of the initial standards and regulations promulgated under this section, no State or political subdivision thereof shall adopt or enforce any statute or regulation of such State or political subdivision with respect to the design, manufacture, or installation or use of any marine sanitation device on any vessel subject to the provisions of this section.

(2) If, after promulgation of the initial standards and regulations and prior to their effective date, a vessel is equipped with a marine sanitation device in compliance with such standards and regulations and the installation and operation of such device is in accordance with such standards and regulations, such standards and regulations shall, for the purposes of paragraph (1) of this subsection, become effective with respect to such vessel on the date of such compliance.

(3) After the effective date of the initial standards and regulations promulgated under this section, if any State determines that the protection and enhancement of the quality of some or all of the waters within such State require greater environmental protection, such State may completely prohibit the discharge from all vessels of any sewage, whether treated or not, into such waters, except that no such prohibition shall apply until the Administrator determines that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for such water of which such prohibition would apply. Upon application of the State, the Administrator shall make such determination within 90 days of the date of such application.

(4) If the Administrator determines upon application by a State that the protection and enhancement of the quality of specified waters within such State requires such a prohibition, he shall by regulation completely prohibit the discharge from a vessel of any sewage (whether treated or not) into such waters.

Under the act, the Coast Guard is required to promulgate regulations which are consistent with the standards promulgated by EPA and with maritime safety and the marine and navigation laws and regulations governing the design, construction, installation, and operation of any marine sanitation device on board such vessels.

The Coast Guard must also promulgate procedures for certifying that a marine sanitation device meets EPA standards and the Coast Guard regulations. This is required by section 312(g) of the act, which states:

(1) No manufacturer of a marine sanitation device shall sell, offer for sale, or introduce or deliver for introduction in interstate commerce, or import into the United States for sale or resale, any marine sanitation device manufactured after the effective date of the standards and regulations promulgated under this section unless such device is in all material respects substantially the same as a test device certified under this subsection.

(2) Upon application of the manufacturer, the Secretary of the department in which the Coast Guard is operating shall so certify a marine sanitation device if he determines, in accordance with the provisions of this paragraph, that it meets the appropriate standards and regulations promulgated under this section. The Secretary of the department in which the Coast Guard is operating shall test or require such testing of the device in accordance with procedures set forth by the Administrator as to standards of performance and for such other purposes as may be appropriate. If the Secretary of the department in which the Coast Guard is operating determines that the device is satisfactory from the standpoint of safety and any other requirements of maritime law or regulation, and after consideration of the design, installation, operation, material, or other appropriate factors, he shall certify the device. Any device manufactured by such manufacturer which is in all material respects substantially the same as the certified test device shall be deemed to be in conformity with the appropriate standards and regulations established under this section.

(3) Every manufacturer shall establish and maintain such records, make such reports, and provide such information as the Administrator or the Secretary of the department in which the Coast Guard is operating may reasonably require to enable him to determine whether such manufacturer has acted or is acting in compliance with this section and regulations issued thereunder and shall, upon request of an officer or employee duly designated by the Administrator or the Secretary of the department in which the Coast Guard is operating, permit such officer or employee at reasonable times to have access to and copy such records. All information reported to or otherwise obtained by the Administrator or the Secretary of the department in which the Coast Guard is operating or their representatives pursuant to this subsection which contains or relates to a trade secret or other matter referred to in section 1905 of title 18 of the United States Code shall be considered confidential for the purpose of that section, except that such information may be disclosed to other officers or employees concerned with carrying out this section. This paragraph shall not apply in the case of the construction of a vessel by an individual for his own use.

Consequently, in view of the provisions of the act pertaining to marine sanitation devices and EPA's standards, the Coast Guard is considering rulemaking action on certification procedures for marine sanitation devices and regulations governing the design, materials, and construction of marine sanitation devices. Tentative procedures and regulations are set forth below for review and comment by interested persons.

It should be noted that this tentative proposal is directed solely to the manufacture and certification of marine sanitation devices. Vessel owners and operators are cautioned that section 312(h) of the Federal Water Pollution Control Act states in part, "After the effective date of standards and regulations promulgated under this section, it shall be unlawful * * * for a vessel subject to such standards and regulations to operate on the navigable waters of the United States, if such vessel is not equipped with an operable marine sanitation device certified pursuant to this section." Vessels subject to this law are, "* * * every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on the navigable waters (the waters of the United States including the territorial sea) * * *"

The tentative proposal reflects the following matters on which comment is particularly invited. In order that adequate certification procedures may be promulgated and in view of a limited Coast Guard budget for this activity, suggestions are solicited as to who should test devices, and the number of qualified persons needed to perform the tests. Information is desired as to the number of laboratories or other organizations that are prepared for these tests and interested in performing these tests for manufacturers, and the number of different models that may be submitted for certification initially.

The Coast Guard is interested in what changes in the design and construction of a marine sanitation device would in fact make it a different model for the purposes of testing and what should be considered to be the features of a device that are essential for treatment, disinfection, and safety.

Comments on the experience and qualifications that persons should have to perform and evaluate the tests properly would be helpful.

In order to select appropriate tests to assure that marine sanitation devices will perform satisfactorily for a reasonable period, comments and information are requested concerning periods of testing, numbers of cycles of operation and samples to be taken during the test period, and environmental conditions of the test.

Comments would be helpful as to whether the use of artificial feces for test purposes is practicable. Information about the types and sizes of devices that may be submitted for certification would be helpful in developing procedures for testing large or unusual devices.

Comments on methods of evaluation of coliform test results, the accuracy of the coliform testing methods, and the capacity of devices to meet the EPA standard would be helpful.

Suggestions on material requirements and appropriate tests of materials used to construct these devices are needed.

It should be noted that under the tentative proposal the testing requirements apply only to devices that treat, disinfect, and then discharge effluent into the water. Holding tanks, recirculating devices, incinerators and other devices that do not discharge into the water would be subject only to marking requirements. Such a device would be certified upon a showing by the manufacturer or vessel owner that it does not discharge into the water. Further discussion regarding other testing and certification requirements under consideration for various types of devices follows below. Additionally, regulations exist pertaining to the safety of life and property which apply to marine sanitation devices installed onboard inspected vessels.

The following matters, regarding which language is not included in the tentative proposal, are also being considered at this time.

There are presently no Coast Guard safety requirements for marine sanitation devices (or numerous other devices and installations), onboard recreational and other uninspected vessels. The Coast Guard has insufficient information to identify safety problems on devices presently in use. Comments on existing or anticipated safety problems for the types of devices that may be used on recreational boats are desired.

Safety standards for recreational vessels could be issued under the authority of the Federal Boat Safety Act of 1971 (Public Law 92–75). Consideration is being given to limiting the temperature rise of an incinerating device to 67° C (120° F) on external surfaces and 41° C (74° F) on surfaces in normal body contact above an ambient temperature of 25° C (77° F).

Consideration is also being given to requiring that manufacturers must indicate the static head rating of the holding tank, if appropriate, and that any holding tank must withstand a hydrostatic pressure test at 150 percent of the manufacturer's static head rating if the tank is installed on an uninspected vessel. When installed on inspected vessels, the normal tank requirements for these vessels would be met.

For inspected vessels, the venting requirements in 46 CFR 56.50–85 would be expanded to include vents from marine sanitation devices. The uses of liquid petroleum gas as listed in § 56.50–102 and in 46 CFR 58.16 would be expanded to include sewage incineration. Sewage incineration would be included in the title of § 61.15–10.

Consideration is being given to requiring that the electrical system and components within a device must meet applicable underwriter's laboratories marine standards.

The Coast Guard intends to standardize the sewage discharge fittings on vessels by allowing either 1½ inch or 4 inch nominal sizes. The expected types of acceptable fittings include threaded, flangled, or quick disconnect fittings. The 1½-inch connections would be used aboard small boats (less than 65 feet in length) and the 4-inch connections aboard larger vessels.

Comments are invited on the kinds of records that should be kept and reports that should be made for the purposes of section 312(g)(3) which is reproduced above.

The Coast Guard is considering records and reports concerning the number of devices sold by a manufacturer, the dates when and places where devices are made, and tests performed on them during manufacture. A report may be required when a manufacturer discontinues a model or ceases manufacturing marine sanitation devices. The Coast Guard also desires assurance that its personnel will be afforded ready access to the records required; comments on the method of achieving this are requested.

The tentative proposal set out below applies only to manufacturers. The Coast Guard may also promulgate rules applicable to the operators of vessels to assure that the devices are installed and operated in a manner that will prevent discharges that do not meet the standards. Rules for vessel operators may be necessary to enable the enforcement of the law and regulation; in particular, a means for verifying dates of installation is needed.

Rules regarding the minimum capacity of devices for vessels, depending on numbers of persons on board, may be needed, and comments on capacity of devices for various kinds and sizes of vessels are invited.

Comments and suggestions are also invited on whether rules concerning installation, maintenance, and repair of devices should be proposed.

To promulgate workable certification procedures and operating requirements for foreign vessels, the Coast Guard needs comments on problems anticipated by the operators of foreign vessels in complying with the certification procedures. Suggestions are invited for a means for showing that foreign vessels comply with the standards and regulations without the necessity for Coast Guard inspection of each device on board foreign vessels in U.S. waters.

Section 312(c)(2) states:

> The Secretary of the department in which the Coast Guard is operating with regard to his regulatory authority established by this section, after consultation with the Administrator, may distinguish among classes, type, and sizes of vessels as well as between new and existing vessels, and may waive applicability of standards and regulations as necessary or appropriate for such classes, types, and sizes of vessels (including existing vessels equipped with marine sanitation devices on the date of promulgation of the initial standards required by this section), and, upon application, for individual vessels.

The Coast Guard's present intention is to waive the standards and regulations only when very extenuating circumstances so warrant and then only for individual vessels on a case by case basis. Procedures for application for such individual waivers would be adopted The Coast Guard does not intend to waive applicability of standards and regulations by classes, types, and sizes of vessels.

With respect to existing or presently installed devices the Coast Guard is considering the following. If device details are submitted and found acceptable and the device is certified, all substantially identical devices previously manufactured to the same plans and specifications (as certified by the manufacturer) would be accepted. Previously manufactured devices need only be identified. New marking would not be required. If accepted, such a device would be included in a list published by the Coast Guard.

In the case of a device no longer manufactured, cooperation of the manufacturer would be solicited in submitting plans, information dealing with the method of identification, and any test results which would be pertinent to the Coast Guard Regulations and EPA standards. If accepted, such a device would be included in a list published by the Coast Guard.

Any evidence that a device or devices were installed in compliance with a State or local regulation or for the purpose of pollution abatement prior to the effective date of these regulations would be given consideration by the Coast Guard. If accepted, such a device would be included in a list published by the Coast Guard.

Any "no-discharge device" is acceptable as meeting the EPA standard immediately. On inspected vessels a "no-discharge" device must also meet the Coast Guard Regulations pertaining to safety of life and property.

It is proposed to amend 33 CFR chapter I by adding a new part 161 to read as follows:

PART 161—MARINE SANITATION DEVICES

Subpart A—General

Sec.
161.1 Purpose.
161.3 Definitions.

Subpart B—Certification Procedures

161.11 Applicability.
161.13 Application for certification.
161.15 Change in design or construction of certified device.
161.17 Certification of test device.
161.19 Tests: general.

Subpart C—Design and Construction

161.51 Applicability.
161.53 General.
161.55 Safety requirements.
161.59 Access to parts.
161.61 Installation, operation, and maintenance instructions.
161.63 Identification.

Subpart D—Testing

161.65 Coliform test.
161.67 Visible floating solids test.
161.68 Chemical resistance test.
161.69 Chemical treatment test.
161.71 Temperature range test.

AUTHORITY.—Sec. 312, Federal Water Pollution Control Act.

Subpart A—General

§ 161.1 Purpose.

This part prescribes requirements for the certification of marine sanitation devices. The regulations implement, interpret, and apply 33 U.S.C. 1322.

§ 161.3 Definitions.

In this part:

(a) "Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping;

(b) "Marine sanitation device" includes any equipment for installation on board a vessel which is designed to receive, retain, treat or discharge sewage, and any process to treat such sewage;

(c) "Manufacturer" means any person engaged in the manufacturing, assembling, or importation of marine sanitation devices or of vessels subject to standards prescribed in 40 CFR 140.3 and regulations promulgated under this part;

(d) "Person" means an individual, partnership, firm, corporation, or association, but does not include an individual on board a public vessel;

(e) "Public vessel" means a vessel owned or bareboat chartered and operated by the United States, by a State or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce;

(f) "Sewage" means human body wastes and the wastes from toilets and other receptacles intended to retain body wastes;

(g) "United States" includes the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Canal Zone, and the Trust Territory of the Pacific Islands.

Subpart B—Certification Procedures

§ 161.11 Applicability.

This subpart prescribes procedures for certification of marine sanitation devices and rules governing manufacturers of marine sanitation devices.

§ 161.13 Application for certification.

(a) Any manufacturer of a marine sanitation device may apply for certification of the device to a representative designated by the Coast Guard to certify marine sanitation devices.

(b) An application may be in any form but must be in writing and be signed by an authorized representative of the manufacturer and include or be accompanied by—

(1) A complete description of the manufacturer's production quality control and records system, inspection methods, and testing procedures.

(2) A signed statement of the times when the manufacturer will permit designated officers and employees of the Coast Guard to have access to and copy the records required by this part.

(3) The specifications for the device including drawings and other information that describe the design, materials, and construction of the device and the installation and operation instructions for the device.

(4) A report of each test necessary to show compliance with this part, including—

(i) A description of the test;

(ii) The results of the test; and

(iii) A statement signed by the person who performed the test that the report is true and accurate.

(5) The name and address of the applicant.

§ 161.15 Change in design or construction of certified device.

An application for certification of a change in design or construction of certified device is made to a designated representative and must include the changes to the specifications for the device and a report of each test necessary to show that the device, as changed, meets the requirements of this part.

§ 161.17 Certification of test device.

(a) The designated representative certifies a marine sanitation device by making a certification statement on the design if the applicant submits the information and report of each test required by this part and he finds, upon examination of the information and reports, that the design of the marine sanitation device and the test device meet the requirements of this part.

(b) The designated representative advises the applicant in writing of the certification of a device or of each requirement of subparts C and D of this part that is not met.

(c) An applicant may appeal a denial of a certification or change in certification made by a designated representative to the Commandant for review.

§ 161.19 Tests: general.

Each test required by this part must be observed by a person who has shown the designated representative by description of his experience and training, that he is qualified to perform these tests.

Subpart C—Design and Construction

§ 161.51 Applicability.

(a) This subpart prescribes design and construction requirements for certification of marine sanitation devices.

(b) Unless otherwise authorized by a designated representative, each person who applies for certification of a marine sanitation device under subpart B of this part must show that the device meets the requirements in this subpart and subpart D.

§ 161.53 General.

(a) A device must be designed to prevent the overboard discharge of sewage, treated or untreated, or of any waste from sewage; or must be shown by tests to meet the requirement in subpart D.

(b) A device must have provisions for mounting that are independent from the connecting pipes.

(c) A device must remain operable throughout a temperature range of 0°C (32°F) to 50°C (122°F).

(d) A device must be constructed of materials which are capable of self-extinguishment in accordance with ASTM standard D–1692.

§ 161.55 Safety requirements.

(a) The design and construction of a device manufactured for installation and operation onboard an inspected vessel must be shown by tests and reports of inspection to be consistent with applicable marine engineering requirements in subchapter F of title 46, Code of Federal Regulations, and with applicable electrical engineering requirements in subchapter J of title 46, Code of Federal Regulations.

(b) A chemical that is used in the operation of a device manufactured for installation and operation onboard an inspected vessel and that is defined as a hazardous material in 46 CFR 146.19–1, 146.20–7, 146.20–9, 146.20–11, 146.21–1, 146.22–1, 146.23–1, 146.24–1, 146.25–5, 146.25–10, 146.25–15, 146.26–1, or 146.27–1 or that is listed in 46 CFR 146.04–5 must be certified by the procedures contained in 46 CFR, part 147.

§ 161.59 Access to parts.

Each part of the device that is required by the manufacturer's instructions to be serviced must be accessible.

§ 161.61 Installation, operation, and maintenance instructions.

(a) The instructions supplied by the manufacturer must have directions for—

(1) Installing the device so that all parts requiring servicing are accessible;

(2) Operating the device so that the discharge meets the requirements contained in §§ 161.65 and 161.67;

(3) Maintenance of the device, including servicing, cleaning, and winter layup;

(4) Venting;

(5) The maximum angle of inclination at which the device operates and meets the standard contained in §§ 161.65 and 161.67;

(6) Handling and storage of the chemical used to meet the standard in §§ 161.65 and 161.67; and

(7) The capacity of the device.

(b) The operation and maintenance instructions required in paragraph (a) of this section must also be printed on a 9- by 12-inch placard that is suitable for posting.

§ 161.63 Identification.

The device must be permanently and legibly marked in one-quarter inch or larger letters with the following information as it appears in the application for certification:

(a) Name and address of manufacturer.

(b) Name and model number of the device.

Subpart D—Testing

§ 161.65 Coliform test.

The geometric average of 20 samples of effluent discharged from the device under the following conditions must be less than 1000 per 100 milliliters of fecal coliform bacteria as tested in accordance with 40 CFR 140.5.

(a) The device must be set up in a manner simulating installation on a vessel in accordance with the manufacturer's instructions.

(b) The device must be operated and maintained in accordance with the manufacturer's instructions.

(c) The device must treat and discharge 500 charges, each charge consisting of at least 160 grams of human feces, 200 milliliters of human urine, and 12 4- by 4-inch sheets of toilet paper within a 120-hour period.

(d) The device must be continuously rolled about its transverse and longitudinal axes with each rolling cycle exceeding a 5° angle and at least 20 percent of the rolling cycles reaching a 30° angle.

(e) The period of each rolling cycle must be no more than 20 seconds and no less than 10 seconds.

(f) No more than one sample for use in computing the geometric average may be taken during any 6 consecutive hour period.

(g) At least one sample must be taken under conditions that simulate the maximum sewage processing capacity described by the manufacturer.

(h) The geometric average of the 20 samples must be determined by the following formula:

$$\log G = \frac{\Sigma \log x}{n}$$

where:

G = Geometric average.
Σ = Sigma (summation symbol).
x = MPN value.
n = Number of tests yielding MPN values.

§ 161.67 Visible floating solids test.

A 6'' x 6'' piece of No. 60 mesh screen must collect no visible solids when skimmed across the surface of a discharge taken from the device during the test prescribed in § 161.65.

§ 161.68 Chemical resistance test.

(a) The material used in a device must withstand the deteriorating effects of—

(1) Sewage;

(2) The disinfectant that is required in the operation of the device;

(3) The chemical compound produced in the operation of the device;

(4) Fresh or salt flush water; and

(5) Any saltwater that may immerse the cover of the device.

(b) Compliance with the requirements in paragraph (a) of this section must be shown by a test in which sample sections of the materials used in the device are partially submerged in each of the substances for 100 hours at an ambient temperature of 22°C (72°F).

§ 161.69 Chemical treatment test.

(a) The device must not discharge when the chemical supply is less than the amount required to meet the standards contained in §§ 161.65 and 161.67.

(b) The device must have a means of indicating to the user an inadequate chemical supply.

(c) The requirements of this section must be shown by a test with the device—

(1) Set up in a manner simulating installation on a vessel in accordance with the manufacturer's instructions; and

(2) Operated in accordance with the manufacturer's instructions.

§ 161.71 Temperature range test.

(a) The material used in a device must not deform, crystallize, or fracture when exposed to temperatures of −40°C (−40°F) and 70°C (158°F).

(b) Compliance with the requirements in paragraph (a) of this section must be shown by tests in which—

(1) The device is placed in a heat chamber that has an ambient temperature of 70°C−5C°+0C° (158°F−9F°+0F°) for at least 8 hours with motor operated or other heat-producing devices operated to simulate normal operating conditions; and

(2) The same device is placed in a cold chamber that has an ambient temperature of −40°C+5C°−0C° (−40°F+9F°−0F°) for a minimum of 24 hours.

Dated June 13, 1973.

W. M. BENKERT,
Rear Admiral, U.S. Coast Guard, Chief, Office of Marine Environment and Systems.

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